

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-002999**Date Inspected:** 10-Apr-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sun Wei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Deck Panel**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Mahlon Lindenmuth, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to periodically monitor welding and Quality Control (QC) functions. While on site the QA Inspector observed and/or discovered the following:

Caltrans QA Inspector,Lindenmuth, monitored the Production Monitoring Tests (PMT)for the OBG Deck Panels U-rib welding.

The weld joint is a single bevel Partial Joint Penetration (PJP) weld that joins the U-rib to the deck plate. The Production Monitoring Test (PMT) is performed prior to the production of the Deck Panels (DP).

PMT #1 consists of (3) ribs totaling (6) weld joints(wj), numbered wj1 thru wj6. Welding was performed on Gantry 1 and represents production for Deck Panels (DP) DP-326-002 and DP-406-001.

The following is information that pertains to the welding of the PMT #1. Listed below are the WPS,welding essential variables,welders and weld joint number. Followed by a short summary:

\*WPS: WPS-B-T-2342 (Dual Process GMAW root pass SAW fill and cover pass)

Welding variables minimum maximum range recorded is as follows:

GMAW-Volts:28.5-30 Amperage:374-379 Travel Speed:530mm/m

SAW-Volts:24.5-25 Amperage:675-681 Travel Speed:525mm/m

Base Metal/Ambient Temperature: 17/19 degrees C

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## WELDING INSPECTION REPORT

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\*Weld joint#(wj#)/welder(ID):

wj1-059603                      wj2-Jien huang feng(059416)

wj3-059443                      wj4-059370

wj5-Jien huang feng (059361)    wj6-059421

ZPMC Quality Control (QC) performed visual inspection of the GMAW weld pass and the subsequent SAW weld pass. ZPMC QC noted both welds as visually compliant. ZPMC QC also performed Ultrasonic Testing of all of the weld joints and noted them as compliant. Caltrans QA Inspector,Lindenmuth, visually reviewed the GMAW weld pass and the SAW weld pass and noted them as compliant with contract documents. Upon completion of the visual review of the SAW weld pass, Caltran QA Inspector,Lindenmuth, marked areas of the PMT that will have macro-etch samples removed. QA observed that the PMT was still in the process of having the macroetch samples cut at 1510. Macroetch samples were not available during the AM shift.

Gantry 2 was idle during the AM shift.

### Summary of Conversations:

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Lindenmuth,Mahlon	Quality Assurance Inspector
<b>Reviewed By:</b>	Cuellar,Robert	QA Reviewer

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